Case Scenario 1:

Three days after Thanksgiving, an eighty year old female reports to the emergency department with a two day history of intermittent, crampy abdominal tenderness. She endorses nausea and emesis for six to eight hours. Her last bowel movement was yesterday. She denies any chest pain, shortness of breath, or neurologic changes. She has had no such episodes previously.

Her past medical history is significant for HTN, HL, and GERD. Her past surgical history is significant for a total abdominal hysterectomy for fibroids “a long time ago” and a sigmoid colon resection for cancer in 2009. She is a non-smoker, and denies EtOH and drugs. Meds include simvastatin, Prilosec, and an anti-hypertensive she cannot remember. NKDA. She denies any significant family history.

Her physical examination is significant for stable vital signs, no acute distress. Abdomen is tender diffusely, moderately distended, without guarding or rebound. Hypoactive, “tinkling” bowel sounds.

A. What are the most common diagnoses in this scenario?
B. What are the most common causes of small bowel obstruction?
C. What are the most common causes of large bowel obstruction?
D. What is the pathophysiology of the “closed loop obstruction?”
Case Scenario 2:

A fifty-five year old male reports to the emergency department with a two-day history of worsening abdominal tenderness. He reports fevers of 102.5F at home. He has no appetite, and endorses mild nausea but no emesis. His last bowel movement was yesterday, and was loose. He reports a several day history of alternating diarrhea and constipation recently.

His past medical history is significant for asthma, GERD, and an MI eight years ago. His past surgical history is significant for an open appendectomy as a child and a RIH repair with mesh ten years ago. He reports not taking his regular medications, and has NKDA. He denies any significant family history.

His physical examination is significant for mild tachycardia, but otherwise stable vital signs. His abdomen is tender diffusely, but he complains of more pain in the LLQ. Abdomen is obese, and mildly distended, with mild guarding and no rebound. Hypoactive bowel sounds.

A. What are the most common diagnoses in this scenario?

B. How does the Law of LaPlace apply to diverticular disease?

C. Describe the Hinchey classification of diverticulitis.

D. What are the indications for surgery in diverticular disease?

E. What are the short-term and long-term dietary recommendations for the conservative management of diverticulitis?
Case Scenario 3:

A seventeen year old female reports to the emergency department after the acute onset of abdominal pain eighteen hours ago. She describes the pain a sharp, point tenderness in the RLQ with associated abdominal crampiness. She has some nausea, but no vomiting. She reports some low-grade fever. Her last bowel movement was yesterday, and her last menstrual period was two weeks ago.

She is otherwise healthy, denying any past medical or surgical history. She has NKDA, and takes only an oral contraceptive. She denies tobacco or drugs. She endorses occasional EtOH, and she is sexually active. She denies any significant family history.

Her physical examination is significant for stable vital signs, no acute distress. Abdomen has hyperactive bowel sounds, and point tenderness in the RLQ with mild guarding. No distention or rebound.

A. What is the differential diagnosis for a young female with RLQ tenderness?

B. Describe McBurney’s sign, Rovsing’s sign, Aaron’s sign, obturator sign, and psoas sign. What is the implication of each?

C. Describe and differentiate parietal (somatic) and visceral abdominal pain.

D. You note inflammation in the terminal ileum with laparoscopy. What specific findings would change your planned procedure?

E. An incidental carcinoid tumor was noted upon pathological evaluation of the specimen. What specific findings would prompt further surgical therapy?
Case Scenario 4:

A forty-eight year old business executive was brought to the emergency department by EMS six hours after the acute onset of stabbing epigastric pain, which began while giving a presentation to the Board of Directors of his company. He is ill-appearing, and lying still on his side.

He reports a recent history of abdominal pain with an empty stomach and at night. He has just started exercising again, and has used advil occasionally for joint stiffness. Otherwise he has a medical history significant for HTN, HL, GERD, and nephrolithiasis. His past surgical history is significant for an umbilical hernia eight years ago, and an IM rod placed in his L femur after a cycling accident ten years ago. He takes Pepcid, and anti-hypertensive, and atorvastatin. NKDA. He has smoked 1ppd for twenty years and drinks moderately regularly. He denies drugs. His father passed away over twenty years ago related to lung cancer.

Her physical examination is significant for tachycardia and tachypnea with stable blood pressure. Abdomen has absent bowel sounds with diffuse tenderness. Positive guarding and rebound.

A. What are the most common diagnoses in this scenario?

B. What is the anatomy of the vagus nerve as it contributes to peptic ulcer disease?

C. Describe the Modified Johnson Classification for peptic ulcer disease.

    Type I:
    Type II:
    Type III:
    Type IV:
    Type V:

D. Describe the pathophysiology of peptic ulcer disease.